DOCUMENT RESUME

ED 354 621 EA 024 689

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TITLE Teacher Incentives in the Third World. Research Reports.
INSTITUTION Florida State Univ., Tallahassee. Learning Systems Inst.; Improving the Efficiency of Educational Systems Consortium.
SPONS AGENCY Agency for International Development (IDCA), Washington, DC. Bureau for Research and Development.
PUB DATE Dec 91
CONTRACT DPE-5823-Z-00-9010-00
NOTE 34p.
PUB TYPE Reports - Research/Technical (143)

EDRS PRICE MF01/PC02 Plus Postage.
DESCRIPTORS *Developing Nations; Foreign Countries; *Incentives; Job Satisfaction; Junior High Schools; Rewards; *Teacher Administrator Relationship; Teacher Behavior; *Teacher Effectiveness; *Teacher Morale; Teacher Motivation
IDENTIFIERS *Botswana; Third World

ABSTRACT

Declining school quality is one of the most serious problems facing Third World countries--particularly in Africa. Economic constraints limit opportunities to enhance teacher morale and performance even while upgrading teachers has become the central component of most efforts to reverse educational decline. While the most powerful incentives clearly tie direct compensation to the performance of the target behavior, resource limitations prompted increased interest in low-cost incentives. Kemmerer suggests that performance is directly linked to the quality and quantity of: (1) remuneration; (2) instructional support; (3) instructional supervision; (4) training; and (5) career opportunities. A sixth influence relates to the degree of community support for teachers and school reform. To improve teachers' satisfaction and performance, Botswana initiated a major reform of junior secondary education. To assess its effectiveness, classroom observations were conducted of 549 teachers in 50 classrooms. Teacher satisfaction is related to the quantity of training and the degree of instructional supervision, community support, and career opportunities. The most direct incentive, housing, appears unrelated to satisfaction. A paradox for school reformers is that increased job satisfaction may not improve performance or student achievement, because satisfied teachers may resist efforts to change. (40 endnotes) (TEJ)

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United States Agency for International Development
Bureau for Research and Development
Office of Education
Contract No. DPE-5823-Z-00-9010-00

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Teacher Incentives in the Third World

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December 1991

Teacher Incentives in the Third World

Declining school quality has been identified as one of the most serious problems facing many Third World countries–particularly in Africa.[1] Among the reasons for this quality erosion are a drop in the quality of those entering teaching, high teacher turnover, and low teacher morale,[2] as well as mixed views about the quality of teacher worklife.[3] One reason for these problems is the lack of effective incentives which would increase the attractiveness of teaching as a career, reward teachers for effective performance, and encourage and maintain high levels of enthusiasm for the teaching process.

Given the serious economic and fiscal constraints now being experienced by many developing countries, their ability to enhance the most direct incentive, salary, is severely constrained. This has led to considerable interest on the part of educational planners and policy makers in identifying non-monetary, low-cost incentives that would allow them to improve educational quality and efficiency with little or no additional cost to government. However, it is not clear what factors under the control of education managers have sufficient incentive value to teachers such that manipulation of those factors could meaningfully improve education. One of the most promising conceptual frameworks of teacher incentives has been offered by Kemmerer.[4] This paper reports results of a study which employed Kemmerer's framework to investigate the relationship of selected incentives to job satisfaction and selected pedagogical practices of junior secondary school teachers in Botswana.

The Rising Interest in Teacher Incentives

The present problem of low educational quality in Sub-Saharan Africa was not created suddenly, nor will it be resolved quickly. During the 1970s and early 1980s, many Sub-Saharan countries experienced explosive growth in their education systems. This growth was a reflection of both rapid population growth and an increased participation rate (the percent of school age children enrolled in Grade one). In response to this enormous social demand for education, countries recruited teachers faster than they could be trained, resulting in large numbers of unqualifed and under-qualified teachers being placed into the schools. The rapid growth in the teaching force put great strain on national education budgets, even at a time when many countries were experiencing serious economic and fiscal problems. As money became tighter, some governments cut back on textbooks, instructional materials, instructional supervision, school construction, and maintenance and let teachers' salaries fall behind the rate of inflation. The convergence of these factors left countries with less well qualified teachers in front of large classes, often in poor facilities, without textbooks or any source of instructional assistance. Quality of education dropped sharply.

As the external efficiency of education dropped, the consequences of low quality education were felt in other sectors of the economy. School graduates had fewer employable skills. National development efforts were slowed. In response, governments began to reexamine their commitment to education and its role in national development and some governments launched new initiatives to fix their education system. While these initiatives typically involve multiple activities within sector-wide strategies, a key part of most initiatives is an effort to upgrade teacher effectiveness within a context of severely constrained resources. These efforts generally take three forms, those aimed at recruiting more and/or better people to enter teaching, those intended to retain teachers already in the system, and those to encourage more effective pedagogical practices.

Indeed, upgrading teachers is the center of most countries' efforts to improve educational quality. Teachers are the group that most directly affects student achievement. Teachers mediate students' encounter with content; they control the classroom activities most directly related to learning. Even other materials- or technology-based innovations have little success of working without the support of the classroom teacher.

At the same time, teachers represent the single largest group within the civil service in virtually every country in the region. Any change in teachers' salary, training, or conditions of work has enormous cost implications. Moreover, the economic problems that led to the quality deterioration in the first place are still present and, in some cases, have become worse. The prospect of identifying a series of low-cost incentives to motivate teachers to perform in new or better ways has a powerful appeal to countries caught in the squeeze of simultaneous declines in educational quality and resources.

Teacher Incentives

Incentive systems are grounded in behavioral theory which posits the use of rewards to shape behavior through a process of operant conditioning. Behavior-contingent reward systems are widely used in education as a means of behavior modification at the student and classroom level. Problems are frequently encountered, however, when the same principles are used to design national teacher incentive systems, due to the difficulties in linking rewards to the desired behaviors. These difficulties, in turn, are partly due to lack of consensus about what behaviors are expressive of good teaching and partly due to measurement problems in assessing teacher performance. Despite these problems, there is extensive interest within many governments in creating incentives systems that will shape teacher behavior in ways that will lead to increased quality and efficiency of education. One constraint on their efforts to formulate effective incentive systems is that there has been surprisingly little empirical investigation of the extent that incentives shape teacher behavior in the desired ways or the types of incentives that have the greatest impact on teacher practices.

The purpose of an incentive system is to modify the behavior of individuals or groups of individuals in the interest of goal attainment. In the case of teacher incentives, the

short-term goal is to improve teacher performance (e.g., retention, classroom pedagogy, etc.), usually in pursuit of the longer-term goal of improving student performance.[5]

However, incentives only lead to better performance if the incentive is contingent on that better performance. This linkage of incentives to performance is posited to operate in two ways. Direct linkage is most consistent with behavioral theory, as rewards and reinforcement are connected to specific patterns of classroom performance. It is illustrated by instructional supervision, in which headmasters or school inspectors observe a person teaching, give immediate feedback, and offer positive reinforcement (praise, recommendations for promotion, etc.) to teachers who are implementing the desired behaviors and negative reinforcement to teachers who are not.

At the level of national teacher incentive systems, the linkage of incentives to behavior is often indirect. Indirect linkages frequently assume that teachers know what pedagogical practices are expected of them and that failure to comply is due to situational constraints that central ministry intervention is able to remove or reduce. Teachers are then able to perform more effectively, leading to reinforcement from extrinsic (praise from instructional supervisors and community leaders) or intrinsic (personal sense of accomplishment) sources. Examples of indirect incentives include the provision of instructional materials and training.

The loose pairing of rewards to behaviors typical of an indirect linkage reduces the efficacy of incentive systems in shaping teacher behavior, though it typifies the level at which most national, centralized efforts presently operate. Decision makers generally recognize this reduction in efficacy, which only heightens the need for empirical evidence on the extent that nationally administered teacher incentive system work.

Kemmerer defines teacher incentives to include all the direct and indirect monetary and nonmonetary benefits offered to teachers as extrinsic motivators.[6] Direct monetary benefits are defined as the package of salary, allowance, and fringe benefits offered to teachers. Indirect monetary benefits include all other resources provided to teachers that are financed by government and communities. These include the professional support the teacher receives, such things as pre- and inservice training, teacher guides, textbooks, instructional supervision and personal support incentives, such as free or subsidized housing, food or transportation.[7] Nonmonetary incentives refer to such things as status in the community, choice of location for the next assignment, and recognition and approval of significant people in the teacher's life–things for which it is hard to calculate the provider's cost in dollar terms.

The most powerful incentive system is one that ties direct compensation (as opposed to non-monetary rewards) to the performance of the target behavior. In general, the exchange value of non-monetary for monetary incentives is low. People would prefer their compensation in a form that allows them to choose the benefits of their work. However, where direct and indirect monetary benefits are small by either absolute or relative standards, interest in low cost or non-monetary incentives increases. As countries have encountered severe financial times, that increase has been exponential. Yet, such en-

thusiasm for low cost solutions to educational quality decline is often the triumph of optimism over experience. While conditions of employment that might have incentive value for teachers are easy to list, surprisingly little is known about the efficacy of any particular incentive structure for bringing about changes that actually improve student learning.

Studying Teacher Incentives

There are essentially two approaches to the study of teacher incentives. One is to ask teachers what factors have incentive value to them.[8] However, this often results in a list of teacher wants without clear indication of the motivational value of the individual items. Teachers, for example, may claim that better school facilities is an incentive, yet not teach differently or remain in teaching in greater rates than they would have with the existing facilities. What teachers want and believe would make their lives more pleasant do not necessarily motivate them to change their behavior. A more effective means of testing the incentive value of various interventions, and the approach used in this study, is to examine actual differences in the attitudes and behaviors of those who differ in the incentives they receive (or at least perceive that they receive). Until recently, this approach has been constrained by the lack of a systematic framework that suggests what input or process characteristics typically operate as incentives.

In the Kemmerer framework, teacher performance is directly linked to the quantity and quality of student learning. She posits that incentives for improved teacher performance include quality and quantity of (1) remuneration; (2) instructional support, such as instructional materials available in the classroom; (3) instructional supervision at the classroom level; (4) training provided to the teacher; and, (5) career opportunities available to the teacher. The present study employed a modified version of Kemmerer's framework to investigate teacher incentives for junior secondary teachers in Botswana.

Two variations were introduced to Kemmerer's framework in adapting it for use in this study. First, career satisfaction, rather than attrition, was employed as a dependent variable. Teacher turnover is not a big problem in Botswana. Between 1985 and 1990, annual turnover averaged 1.5 percent at the primary school level and 8 percent at the secondary school level.[9] This pattern largely reflected the lack of employment alternatives. Unemployment is estimated at around 20 percent and many teachers would have difficulty finding other employment offering comparable compensation. Career satisfaction was employed as a proxy of teachers' desire to leave teaching should alternative employment opportunities become available. At the same time, it was posited to be a mediating factor in teacher performance. In developing country contexts, career satisfaction has been found to relate to both the enthusiasm teachers bring to their teaching (which some research reports is related to student achievement)[10] and their decision to remain in or leave teaching.[11]

The second modification was the addition of a sixth incentive category, community support, recognition, and approval, based on the considerable research evidence from

developed countries indicating that support, recognition, and approval of significant other people often operates as an intrinsic reward to teachers[12] and that community interest and involvement in schooling is an important factor in both student achievement and teachers' work experience in many developing countries.[13] The revised framework employed in this study is presented in Figure 1.

The Botswana Context

While the types of incentives suggested by Kemmerer's framework are relevant across a wide range of countries, the manner in which they operate in any particular country is heavily contingent on the particular history and context of that country. To understand the findings of the present study, conducted in Botswana, requires some understanding of how the proposed incentive elements operate in that setting.

Primary school enrollments grew dramatically during the 1970s and early 1980s, leading to intense social demand for increased access to post-primary educational opportunities for primary school leavers. In response, many communities sponsored their own community-based junior secondary schools (CJSS), which typically provided an additional two years of schooling. An education sector assessment conducted in 1985 confirmed what Ministry officials were beginning to recognize. Lacking the resources to provide adequate instructional materials or qualified teachers, CJSSs were of inferior quality and, while the cost per student was lower than in Government supported schools, the high student attrition rate resulted in a higher cycle cost. The seemingly lower cost CJSS option was actually more expensive.[14]

In an effort to remedy these problems, the Ministry of Education (MOE) initiated a major reform of junior secondary education which involved the development of new instructional materials, teacher training, and an increased Government role in staffing and management of the previously community-sponsored schools.[15] The intention was that communities would continue to contribute, primarily through the provision of teacher housing, supplies, and facilities maintenance. The MOE would staff the schools, pay the teachers, and exercise more control over the curriculum.

While an effective way to raise the quality of instruction, the shift in control from communities to central government encountered complaints from communities, whose members felt they had lost effective control of their schools while still being expected to pay for them. Part of the problem was a difference in the goal orientation of communities and government. The interest of the communities was in providing special advantage to their children, a competitive edge relative to the children of other communities. The interest of Government was to equalize and extend educational opportunity across communities. As government took a greater role in controlling the schools, many parents believed their local contributions were not yielding the comparative advantage they once had for their children. Concern grew. Rural communities became less willing to financially support their junior secondary school; few com-

munities identified in any way with the local junior secondary school–the school was the "government's".

The problem was further exacerbated by the Ministry's success in expanding the junior secondary (JS) system. Between 1985 and 1990, the number of community junior secondary schools increased from 42 to 146, providing admission to approximately 15,000 more students. This allowed the continuation rate of standard 7 (grade 7) leavers into Form 2 (grade 8) to rise from 38 percent in 1985 to 66 percent by 1990. One consequence, however, was that junior secondary schools were constructed in communities that may have had no history of community contribution to junior secondary education and who saw the community support of the school as a new demand rather than as a shift from a previously established pattern. In order to staff these schools, teachers from different geographical and ethnic backgrounds within the country were often assigned, a practice often unpopular with both the teacher and the community. Hence, in some communities the rapport that had once existed between communities and their schools weakened. It is against that background that this study of teacher incentives was undertaken. The manner that individual categories of incentives have operated within the Botswana context are discussed below.

Remuneration most directly includes salary and fringe benefits. Less directly, it includes whether teachers hold a second income producing job and whether or not teachers are provided with housing. Salary was not included in this study because (a) salaries of Botswana teachers are not disproportionately high relative to those of other civil servants, minimizing the impact of salary as an incentive to enter teaching and (b) salary in Botswana tends to be formula driven, determined by a teachers' level of preservice education, seniority, and the number of people supervised (in the case of senior teachers, deputy headmasters, and headmasters). Differential salary (merit pay) is not used to reward particularly meritorious teaching, minimizing its impact as a performance incentive.

Whether or not teachers held outside employment also was excluded from this analysis. In some countries, educational planners argue that the job demands in teaching provide teachers the opportunity to hold supplemental employment and that this operates as a factor in the overall attractiveness of teaching as a career. However, supplemental employment did not appear to be a factor in Botswana; less than three percent of the teachers reported holding an outside job. This is largely due to Botswana Ministry of Education regulations which prohibit teachers from holding other income producing employment. Consequently, teaching in Botswana, unlike some other countries, is not viewed as a type of employment that accommodates supplemental income opportunities.

Even if this regulation were not in effect, there is some reason to question the incentive value of opportunities for outside income. Across different countries the opportunity for outside employment can be interpreted as either an incentive in recruitment or a disincentive to effective classroom performance. In some countries, though

not in Botswana, there is evidence that opportunities for teachers to provide private tutoring undercut their instruction, as poor performance during normal teaching hours increases the demand for their private services.

In many countries, housing is offered as an income supplement and, often, as an inducement to attract teachers to rural areas where housing is difficult to obtain. It was expected to be an important factor in Botswana. Housing in both urban and rural areas of Botswana generally is hard to find and there are long waiting lists. In response to that situation, schools are supposed to provide teachers with housing and, for the teacher, the housing represents an important benefit. Communities and the MOE are each responsible for providing half of the staff housing needed by the school. The extent to which this has occurred has varied widely, depending on both the financial ability and disposition of the community. Since housing is an expectation on the part of teachers, the failure to get housing probably operates more as a disincentive than as an incentive. Nonetheless, whether or not a teacher received housing is expected to be an important factor in their career satisfaction. Moreover, in some communities lack of housing may indicate a neutral or negative community regard for the school, a subtle indication of poor teacher-community relationships.

Instructional Supervision is supposed to be provided at the Ministry level by Education Officers who visit schools and at the school level by headmasters. However, in practice Education Officers have tended to serve more of a central administrative role, assuring that teachers had materials and attending to general subject area considerations, rather than an instructional supervision role. Headmasters, in turn, are primarily seen as managers of the school's administrative affairs–ordering textbooks, keeping records, and maintaining discipline. In the last five years the MOE has been trying to emphasize the importance of the headmaster in instructional supervision, but the idea has not been widely accepted and is still not explicitly stated in the headmasters' official job description. In part this is because headmasters are not necessarily selected on the basis of their teaching skill, have virtually no training in instructional supervision, and do not always feel competent to judge teachers' abilities, particularly in subjects outside the headmaster's own area of specialization. Recent inservice training of headmasters has emphasized the use of staff meetings as a forum for discussing the strengths and weaknesses of pedagogical styles and methodologies. While the instructional supervision role of Education Officers and headmasters still is weak, it is all the more reason to expect that EOs and headmasters who do operate in this role are likely to have an impact on teachers' instructional practices.

A less direct, but still important form of instructional supervision comes through the written guidelines and directives that teachers receive from the Ministry or the headmaster, typically aimed at helping teachers address a common problem, such as student attrition or the evaluation of student performance. These guidelines can highlight the importance of an issue and suggest strategies for responding to it. It is expected that the presence of written guidelines that address important issues of classroom practice might have an impact on teaching behavior, given the otherwise weak system of instructional

supervision. Moreover, it is expected that the presence of written guidelines would have a positive impact on career satisfaction, as the guidelines provide both structure and assurance to teachers trying to grapple with the issues addressed by these guidelines.

The provision of **Instructional Materials** is one of the most important ways of supporting the teacher and enhancing student achievement. The availability of instructional materials is posited to operate as an incentive in both direct and indirect ways. As a direct incentive, good instructional materials serve to select, organize, sequence, and pace the presentation of content, thereby reducing the complexity of the teachers' preparation and presentation. Sufficient materials in the classroom allow the teacher to assign learning activities that keep the class meaningfully occupied, giving the teacher an opportunity to work with individual students. Good materials can help compensate for weak or uneven teacher preparation, providing students with an effective presentation of content even when the teacher is unable to do so. Instructional materials operate as an indirect incentive to the extent that systematic and well targeted presentation of the content results in increased student achievement which, in turn, reflects positively on the teacher, enhancing their sense of professional efficacy and job satisfaction.

Relative to most other Sub-Saharan countries, there is substantial instructional material in Botswana schools. Students have textbooks and exercise books, the curriculum is well defined, and teacher guides are available in most schools. Many schools have libraries, which provide both teachers and students with supplemental reading material. While important to student learning and teacher's quality of worklife, the widespread availability of these materials should diminish their importance as an incentive. As argued earlier, the incentive value of an item is defined in large part by the probability of its absence. Written guidelines from the Ministry or teacher are less widely available. While the Ministry has made efforts to develop and distribute written guidelines addressing selected issues, such as student attrition and continuous assessment of student progress, the distribution of these guidelines is uneven. Hence, there is greater variability in the availability of written guidelines than of textbooks, a characteristic favoring their importance within a correlational study.

Community Support, Recognition, and Approval: Research in developed countries has identified the recognition and approval of significant other people, particularly administrators, supervisors, family and close friends, to be a major determinant of teacher retention in teaching and of teacher job satisfaction.[16] These factors are posited to be even more important in Third World settings, where teachers are often located in small schools in rural communities where they have few professional colleagues and little contact with Ministry personnel. In such situations, the support and approval of the significant people in their immediate environment may take on an even greater incentive value.

Separate, but closely related, is the community support teachers receive. In most developing countries, teachers are employed, supervised, and evaluated entirely by the central Ministry of Education. Members of the community in which they are located

often have little or no formal authority over teachers' activities or conditions of employment. One consequence is that teachers may feel little allegiance or responsibility to the local community. The community, in turn, has little effective means for sanctioning teachers who are absent or inattentive.[17] The loose linkage between teacher and community is accentuated when teachers are posted to villages away from their own home area. Consequently, good teacher-community rapport, while it generally occurs, is not a foregone conclusion. It requires effort on both sides. For the teacher, however, it can result in enhanced prestige in the community, and tangible improvements to the teacher's living and work conditions as grateful communities supply needed resources to the school. For example, communities may supplement teachers' salaries (through cash or food contributions), build furniture, maintain school facilities, and generally make life easier for the teacher.

Parental and community involvement can also result in gains in student achievement. Parental support and encouragement of the schools has been found to be an important factor in pupil achievement across many countries. Parental interest signals to their children that the activities of schooling should be taken seriously. The involvement can also provide a way that parents, who may not themselves have attended school, learn what they can do to reinforce their children's school experience, for example, assuring that children do their homework.

The issue of community support of junior secondary schools takes on special significance in Botswana, given the recent history of the increased government role in the management of these schools. Some communities have expressed considerable displeasure at the loss of direct community control of the schools, others have little or no history of community involvement. As pointed out earlier, this problem has been further exacerbated by the inability of government to ensure that the teachers assigned to a school be from the same language or ethnic grouping as the community to which they are assigned. Consequently, many teachers do not enjoy the same level of rapport with the local community they might have experienced ten years ago. Conversely, those teachers who manage to overcome that history and maintain a strong relationship with parents and other community members may benefit both from the intrinsic reward of the recognition and approval they receive from people in the community and quite tangible rewards, as communities are more willing to contribute to the upkeep of the school and subsidize the upkeep of the teacher.

Training is often seen as an incentive, but in divergent ways. Training presumably increases recipients' ability to teach effectively which, in turn, should result in greater self respect, community status, and job satisfaction as their work results in more positive student learning outcomes. Related assumptions are that training makes teachers more effective, and more effective teachers are more satisfied with teaching and more likely to remain in teaching. Both of these assumptions are arguable.

Training changes the opportunity cost of teaching as it provides teachers with the skills they need to more successfully compete for promotions to better paying or higher

status position in other sectors of the economy. Consequently, training, particularly pre-service training, may operate as an incentive to leave teaching. Similarly, it is not always clear that teachers will use their new skills in ways most likely to enhance student achievement. Some evidence has been found of teachers with greater training using those skills to reduce the complexity of their worklife, sometimes by emphasizing classroom discipline and control over active student participation and higher levels of cognitive interaction among pupils, behaviors widely thought to increase student achievement.[18]

Teacher training has particular salience within the Botswana context. One of the reasons that community junior secondary schools were absorbed into the government system was the low quality of instruction due, in large part, to the heavy reliance on under-qualified teachers. Between 1985 and 1990, the percent of untrained teachers, those without formal teacher training, fell from 26 percent to about 15 percent of the JS teaching force.[19]

Teachers considered qualified still vary widely in their pre-service training. The minimum qualification is graduation from a two-year teacher training program, three months of which is devoted to teaching practice. Successful completion of the program qualifies a person to teach in a primary school. However, in the rapid expansion of the junior secondary schools, a number of teachers with this credential were hired in at the JS level. Entry into this two-year teacher training program is a primary school leaving certificate and two years of teaching experience (as an unqualified teacher). Those wishing to go directly into junior or senior secondary school are required to be a secondary school graduate and to take at least a three-year teacher training program. Entrants to this program tend to have second level (O level) passes from secondary school, which limits their opportunity for university level training. In the two-year program, preparation is as a content generalist. In the three-year program, students must choose two areas of content specialization. Some secondary school graduates with high enough examination scores can pursue a Bachelors degree in teaching at the University of Botswana. Emphasis in the University program is in single subject specialization; instructional methods courses are subject specific. A few individuals also earn a masters degree in Education at the University of Botswana and return to teach in the schools.

Opportunities for Career Advancement: In most countries teaching is relatively unstaged; the activities of a new teacher are essentially the same as those of an experienced teacher.[20] Continued years of teaching are seen more as repetition than as career advancement. Opportunities for career advancement generally involve leaving classroom teaching to become a school administrator, a Ministry official, or to take a better paying position in another sector. Nonetheless, pursuing a teaching career is often seen as a way to secure these advantages, as prospective teachers have access to education and training opportunities not available to others or for which the they would not otherwise qualify. For example, in some countries teacher training offers a backdoor route to university admission for individuals who might not have the ability or connections to gain that admission directly.[21] In other countries, teacher training itself is a

sufficient credential to give individuals an edge in competing for non-teaching jobs. For example, one of the problems in pre-civil war Liberia was that few graduates of teacher training entered teaching.[22] One of the incentives to enter teaching, then, is to qualify for special training opportunities extended to prospective teachers, which would then qualify the teacher for an even greater range of alternative employment opportunities outside of teaching.

While the salaries of teachers are at the low end of the civil service scale, with the exception of science teachers, they are generally above what most teachers could expect to earn in the private sector of Botswana. This accounts for the relatively low teacher turnover. Nonetheless, there are opportunities to advance within the school. Each school has several senior teachers (depending on school size), a deputy headmaster, and a headmaster. These positions carry status and generous salary increments relative to the classroom teacher.[23]

The rapid increase in the number of JS schools has resulted in a substantial number of opportunities for teachers to be promoted to an administrative position. While the rate of new school starts is expected to taper off somewhat, national plans still provide for about ten new schools each year for the next five years. While this may lead to increased competition for available administrative positions, the expected growth of the system is sufficient to allow advancement to an administrative position within the education system to be a realistic aspiration, at least for the time-being.

The Study

This paper reports an empirical test of a variation of Kemmerer's framework using data from junior secondary school teachers in Botswana. In Part One of the present study, six factors were posited to be related to teachers' level of career satisfaction: remuneration, amount of pre- and inservice training received, community support, recognition and approval, amount of instructional supervision, availability of instructional materials, and opportunity for career advancement. In Part Two, the same six factors were posited to be related to patterns of teachers' pedagogical behavior. The question under investigation in Part Two was the extent to which teachers who differed in their pedagogical behavior also differed in the level of incentives they had received.

During June 1989, classroom observations were conducted of 549 teachers in 50 junior secondary schools (out of 76 possible schools) in Botswana. The observations were conducted by a site visit team staffed by education students from the University of Botswana. The observers employed an observation protocol which consisted of 97 measures of teacher attitudes, pedagogical practices, and classroom conditions. Each teacher was observed for a total of 40 minutes on up to three different occasions. In the present study, teachers were grouped into different patterns of teaching behavior based on a cluster analysis of selected classroom observation data. Discriminant analysis was used to determine the extent that groups defined by different patterns of pedagogical behavior differed in the level of incentives they had received.

While in the school, site visit teams also had those teachers being observed complete the Botswana Junior Secondary Teacher Questionnaire (BTQ). The questionnaire collected teachers' ratings of their working conditions, beliefs about teaching, and career satisfaction. Items on the BTQ operationalized dimensions of the framework being employed. Multiple regression analysis was used to test the relationship between the level of incentives teachers had received and teachers' career satisfaction.

Sample

Classroom observation and teacher questionnaire data could be matched for a total of 305 teachers in 39 of the SO junior secondary schools in the larger study. Of these, 65 percent were Batswana, eight percent were expatriates from other African countries (usually employed on a contract basis by the Botswana government), and 27 percent were non-African expatriates, such as U.S. Peace Corps, often provided as part of bilateral aid agreements. Since the terms of expatriates' employment and their relationship with the Ministry of Education differ from the Batswana, it is unlikely the same incentive systems apply. Consequently, the remainder of the study was limited to the 197 Batswana teachers who were both observed and completed the BTQ. In the regression analysis of teacher satisfaction, a mean substitution procedure was used to handle missing data.

The number of teachers observed at each school ranged from one in a rural location to 13 in an urban location. Participants in this study averaged 29 years of age and there were slightly more men (59%) than women. One-third of the observations were conducted at Form 1 (grade 7), with the remainder at Form 2 (grade 8). The classes observed were in seven subject areas (art, design and technology, English, mathematics, science, Setswana, and social studies), with English and mathematics classes being the most frequently observed.

Instrumentation

The Botswana Classroom Observation Tool (BCOT)[24] was based on the work of Stallings and of Snyder, Fuller, and Allen and is described more fully in work by Fuller and Snyder and by Snyder, Chapman, and Fuller.[25] Using the BCOT, teachers were observed for a forty minute period, during which time observers recorded the availability and use of basic instructional material, use of class time, and frequency of selected teacher and pupil behaviors. Eighteen of these items, presented later in Table 1, were employed in the present study.

One of the strengths of this study was the use of an observation procedure, which provided an independent assessment of teachers' classroom behavior. Indeed, it addresses a major criticism of much classroom research in the Third World which has lacked independent measures of classroom process. Nonetheless, measurement problems often arise in the collection of observation data: (l) Two observers may perceive the

same classroom activities differently. And, (2) pedagogical behavior often differs as much or more for the same teacher across occasions as it does among different teachers.[26]

Consequently, observation data are strongest when based on data from multiple observers over multiple occasions.

The number of observations per teacher ranged from one to three, with most teachers observed twice. An inter-rater reliability study conducted with 35 classrooms indicated relatively high inter-rater reliabilities.[27] The high consistency among observers was interpreted to mean that the data provided by a single observer would not differ meaningfully from what would have been provided by multiple observers. Further, it was judged that the threat (to external validity) posed by the loss of data if single-observation teachers were dropped from the study would be greater than the threat posed by use of single observations, given the high inter-rater reliability. Consequently, data for teachers observed only once were retained.

The *Botswana Junior Secondary Teacher Questionnaire* (BTQ) consisted of 242 items which collected information on teacher self-rated skills, attitudes, and beliefs about teaching. While teachers filled out the questionnaire on their own, site visit team members were available to clarify items and answer questions. The items used to operationalize the components of the framework and their scale of measurement are discussed below.

Dependent Variables

Cluster analysis, based on the 18 items in Table 1 (presented later in this paper), was used to determine if different patterns of pedagogical behavior existed among the 355 Batswana teachers who participated in the classroom observation study. These 18 variables were chosen because they captured teaching behaviors that are widely cited in the literature as components of effective teaching. In particular, they tap the extent teachers were organized, stayed on task, employed active student learning strategies, and appeared to understand and be able to explain the content of instruction. Membership in the clusters formed by these items was employed as a dependent variable.

Career Satisfaction was employed as the dependent variable for the second analysis in this study. Previous research on career satisfaction reflects conflicting conceptions of both the construct and how to measure it.[28] The most common approach has been to collect teachers' self-ratings of their career satisfaction on Likert-type scales, which assumes that satisfaction can be understood as a continuum. An alternative perspective is that job satisfaction is not a conceptual continuum--some factors are satisfiers when present but not dissatisfiers when absent.[29] The particular assumptions under which this study was conducted were that (l) people do have generalized attitudes toward their career and current employment, (2) people can discriminate between disliking their job and having a bad day, and (3) people in the same type of employment vary in the intensity of their satisfaction with that employment.[30] Consequently, in the present study,

career satisfaction was operationalized as teachers' self-rating of their satisfaction with teaching as a career.

Independent Variables

Remuneration: For reasons described earlier, salary and outside employment were not appropriate for inclusion in this study. Since there was considerable variance in the provision of housing among the teachers in this study, it was retained as the only variable in the remuneration category (1 = no; 2 = yes). *Instructional Supervision* included the teachers' count of how many times in the last three years their headmaster or an MOE inspector had visited their classroom and, secondly, whether they had received MOE guidelines for evaluating pupil performance or for reducing student attrition from either their headmaster or a Ministry source (1 = no; 2 = yes). Teachers' indication of whether they had received these guidelines was seen both as a direct measure of the amount of instructional support and advice they received and as a proxy of teachers' general level of communication with supervisory personnel about instructional issues. *Availability of Instructional Materials* included four items: whether their school had a library (1 = no; 2 = yes), the extent they believed they had enough materials and supplies to teach effectively (0 = not at all; 7 = to a great extent), whether they had received a teacher's guide for their subject area in the last two years (1 = no; 2 = yes), and the number of exercise books they had received per pupil.

Community Recognition, Approval and Support was operationalized by a scale composed of teachers' ratings of how successful they were in gaining the approval of their peers, their supervisors, and their family and close friends (0 = not at all; 7 = to a great extent). The internal consistency reliability was estimated as .77. The *Training* variable set included how many of the four available types of inservice training activities teachers had participated in during the past three years, the total number of workshops or inservice training programs they had attended in the last three years, and the amount of pre-service education and training they had received. *Opportunities for Career Advancement* was measured as teachers' ratings of the extent that they believed their position offered opportunities for further advancement (0 = not at all; 7 = to a great extent).

Data Analysis

The analysis was conducted in three steps. In step one, separate regression analyses to predict job satisfaction were computed for each of the six incentive categories described above. In step two, those incentive categories that were significantly related to job satisfaction were combined into a summary regression analysis using a setwise entry procedure. The summary analysis was computed over 197 Botswana teachers.

This two-step procedure to predict job satisfaction had the effect of maximizing the amount of explained variance (R^2) in the final regression over what would have been explained in a test of the full framework, since only incentive categories known to relate significantly to satisfaction were included in the summary analysis. The procedure was

judged appropriate for two reasons. First, the separate analysis for each category could be computed over a larger number of teachers (than were included in the full analysis), since the separate analyses minimized the impact of the listwise deletion of missing data. The larger sample sizes may yield more reliable estimates of the relationships being investigated. More importantly, the policy agenda underlying the study was to identify the combination of incentives that offered maximum relationship to target outcomes (career satisfaction, teaching behavior). In practice, the interest of educational policy makers is not so much in judging the full framework, but in isolating a combination of components offering the greatest potential impact in their efforts to improve education. While most decision makers understand that correlation does not denote causality, strength of relationship is, nonetheless, recognized as a reasonable basis for designing interventions within the policy arena. The interest of decision makers is to narrow the component sets as much as possible in an effort to focus their interventions on the most likely points of impact.

In the third step of the analysis, a cluster analysis using the 18 teacher pedagogical behavior variables was computed to identify subgroups of teachers based on their different patterns of teaching behavior. Since data on the 18 classroom practice variables were collected using different scales of measurement, a z-score transformation was performed, and the cluster analysis was computed using the z-score values.[31] Since the resulting cluster sizes did not support the use of a multivariate analysis to test the extent that cluster membership could be predicted by differences in the level of incentives teachers had received, a series of oneway analyses of variance were performed to test differences in incentive levels separately for each incentive category.

Results

Pedagogical Behaviors: Results of the cluster analysis indicated that there were three groups of teachers, distinguished by statistically significant differences in behavior on 14 of the 15 dimensions of teacher activity (Table 1). Behavioral differences most important in defining the clusters (based on their F ratio in the cluster analysis) included teachers' accurate, thorough, and logical presentation of content, elaboration and use of examples, and prior preparation for the class.

Group 1, consisting of 22 teachers, differed from the dominant pedagogical pattern (represented by Group 2) mostly in terms of what they did not do. Teachers in this group tended to provide less of an overview of the material to be covered during the period (than teachers in others groups), less presentation of new material, and less review of what was covered. These teachers appeared less well prepared for class, were less logical in their presentation of material, offered less elaboration and use of examples and offered less student feedback. As a group, these 22 individuals were less effective teachers.

Group 2, consisting of 325 of the 350 teachers in the analysis, represented the dominant pedagogical pattern of instruction at the junior secondary level. An examina-

tion of item means offers a basis for describing this pattern: Junior secondary teachers tended to lecture to the entire class about half the time and engaged the entire class in recitation or practice drills another third of the time. In their lectures, teachers usually provided pupils with an overview of the material to be covered, nearly all asked pupils questions or assigned exercises to allow pupils to practice the materials, and about half reviewed with pupils what material was covered in the class. During the lectures about half of the teachers presented new material.

Observers judged objectives of the lessons to be only moderately clear, though teachers seemed well prepared for the lesson and appeared to have offered accurate, thorough, and logical presentation of content. Teachers made frequent use of examples and generally employed simple, straightforward presentation of material. At the same time, classrooms were extremely teacher centered. Teachers tended to work with the entire class; virtually none of the teachers broke students into small work groups. Teachers did not offer much feedback to students and classes were characterized by little, if any, student initiative.

Group 3 was composed of only three teachers, outliers who emphasized communications with individuals or small groups (as opposed to lectures to the whole class) and encouraged high levels of student initiative.

This pattern of group membership suggests a tremendous sameness in the pedagogical behavior of junior secondary teachers. The small number who differ from the norm (Group l) generally can be characterized as particularly ineffectual instructors, weak outliers. Group 3 is so small in number that it is, unfortunately, inconsequential. The sameness suggests that differences in teacher incentives have little impact on pedagogical behavior, because there are virtually no meaningful differences in pedagogical behavior across teachers.

Nonetheless, it is possible that those teachers in Group 1, characterized as generally less effective, differed in some systematic way from the majority in the incentives they received. However, comparisons of these 22 teachers with a random sample of 40 Group 2 teachers on each of the incentive variables using oneway analysis of variance yielded no significant differences on 13 of the 14 comparisons. While teachers who differed in the number of exercise books received by their students differed significantly in their classroom instructional practices ($F = 7.68$; $p < 01$), with weaker teachers (Group l) reporting more exercise books, the finding was discounted due to the high collective error rate (the probability of obtaining a statistically significant finding by chance when conducting 14 separate anovas).

Teachers' Job Satisfaction: Four of the six separate regression analyses yielded statistically significant results (Table 2). Specifically, the variable sets concerned with amount of instructional supervision, community support, amount of training, and opportunities for career advancement were each significantly related to career satisfaction and were retained for further analysis. Neither the availability of instructional materials nor the

provision of housing was related significantly to teachers' career satisfaction and were dropped from the subsequent analysis.

While the incentive value of individual variable sets is important to understand, the greatest policy implications emerge from an understanding of the compound effects of multiple incentives. Consequently, these four incentive sets were combined into a summary analysis, reported in Table 3. The entry of each of the four variable sets significantly increased the amount of variance explained, and together accounted for 31 percent of the variation in teachers' ratings of their career satisfaction ($F = 8.21$, $p < .001$).

Teachers' satisfaction with teaching as a career was related significantly to the amount of training, instructional supervision, and community support, recognition, and approval they had received, and their belief that their present position offered opportunity for further advancement. Teachers reporting higher levels of career satisfaction were more likely to have less formal pre-service education but to have attended more in-service training, have had more headmaster visits to their classroom to evaluate their teaching, and were more likely to have received guidelines for evaluating pupil performance and reducing pupil attrition. They were also more likely to have received recognition and approval of significant others, particularly administrators, family, and close friends. Most of all, more satisfied teachers were more likely to believe they had opportunities for further advancement.

Discussion

This study examined the extent that factors suggested by a variation of Kemmerer's framework of teacher incentives were related to teachers' instructional practices and career satisfaction. Results indicated widespread similarly in teachers' pedagogical practices, a homogeneity that made it impossible to test whether differences in pedagogical practices were due to incentive structures within the workplace. At the same time, 31 percent of the variance in teachers' career satisfaction could be explained by four categories of incentives: the recognition, support and approval of significant others; the extent teachers believed their job held prospects for further advancement; and the amount of training and subsequent instructional supervision they received. Whether or not teachers were provided with housing and the availability of instructional materials in the classroom were not related significantly to career satisfaction.

The results pose an irony. The incentives related to teachers' career satisfaction, while possibly stimulating recruitment and encouraging retention, were not significantly related to improved classroom performance of teachers. To improve the overall career satisfaction of teachers would not necessarily lead to improved instructional practices. Indeed, the enhancement of job satisfaction might make changing teachers' instructional practices more difficult, since getting teachers to change their practices often results in increased complexity of worklife for teachers.[32] The more satisfied teachers are, the less likely they will want to change. But this irony poses a problem only if teachers' instruc-

tional practices need to change. If teachers generally are employing effective pedagogy, the efforts to increase career satisfaction would not necessarily undercut instructional quality. Unfortunately, this is not the case.

Junior secondary education in Botswana, as in many developing countries, is teacher-centered and teacher-dominated, emphasizing lecture and class recitation and minimizing individual student involvement and initiative.[33] Teachers talk; students listen, copy notes from the blackboard, and recite when called upon, usually in unison. Emphasis in learning is often on memorization rather than problem solving; on recall rather than on creativity. Discipline is important and often strictly enforced. While this general pattern is widely recognized,[34] an important finding of this study is the pervasiveness of this pattern across junior secondary teachers. Nearly all teachers conformed. Those that didn't were not exhibiting better pedagogical practices, but worse ones. Indeed, there was not enough variation in patterns of teaching behavior for teaching behavior to be linked to the differential receipt of incentives. This does not mean that the careful programming of incentives could not be used to modify teacher behavior, only that such programming will not be able to capitalize or build on naturally occurring relationships already in evidence. Nonetheless, the results raise serious questions about the efficiency of manipulating incentives as a way of shaping actual instructional behavior.

The sameness across teachers stands as a testament to the power of this shared notion in Botswana of how teachers should teach. Results lend support to Fuller and Snyder's description of teaching as a sticky institution, in which the shared conception of how teachers should teach is so "sticky" that it overwhelms potential variation in teaching style expected to emerge from differences in teacher gender or subject area being taught.[35] Such sameness also helps explain why the identification of correlates of effective teaching practice in Third World settings has been so difficult.[36] Most studies have employed correlational procedures that depend on variance in teaching practice that the present study suggests does not always exist.

Such widespread sharing of beliefs about teaching does not occur by accident. They emerge and are held in place by a wider set of societal beliefs about the activities of schooling, presumably transmitted formally through teacher training and informally through professional experience and social contact. These dynamics need to be understood if planners are to develop effective interventions to change teaching behavior, lest interventions be mistargeted. For example, the homogeneity in instructional practices observed in this study suggests that either teacher training is extraordinarily effective in shaping most teachers into the same mold, or markedly ineffective in inciting some teachers to try different instructional approaches. Interventions aimed at improving teacher training would be very different, depending on which of these was the case.

Returning to the analysis of *career satisfaction*, findings indicated that the variables with the greatest incentive value were those that entailed interpersonal contact–through training, supervision, and community support. Those involving little or no interpersonal

contact–remuneration and availability of instructional materials–while important to teachers, were not systematically related to satisfaction. The incentive value of interpersonal contact and intrinsic rewards for Batswana teachers is consistent with findings from other countries. For example, the recognition and approval of family, friends, and school principal have been found to be an important correlate of teacher's job satisfaction in both Jamaica[37] and the United States.[38] The present findings suggest that increasing career satisfaction may best be achieved through a strategy that emphasizes community-school and headmaster-teacher relationships, inservice training, and clear tracks by which teachers can advance in their careers. To evaluate the policy implications of this finding requires attention to two issues, the extent to which teacher satisfaction is an important outcome for governments to seek and the extent that it is amenable to change through central ministry intervention.

Teacher satisfaction has both a political and educational dimension. Teachers constitute the largest portion of the civil service in many countries, and teaching is the government service most pervasive and visible at the local level. Unhappy teachers are a public relations problem for government. Many governments fear the negative political consequences of widespread and extended dissatisfaction among teachers, quite separate from any consideration of educational quality. But the primary concern of most countries is educational quality. In this issue, whether or not teachers are satisfied with their careers is not itself an appropriate end-goal, but an intermediate element in the more important consideration of teachers' **behavior**–their decision to enter and remain in teaching, support new educational initiatives, and perform effectively in the classroom. A low level of career satisfaction is a proxy that indicates problems which, if not addressed, may undercut any other efforts being made to improve educational quality. Chronically low levels of career satisfaction can seriously erode government's ability to maintain a qualified teaching force. However, the findings of this study indicate that having more satisfied teachers does not by itself ensure more effective teachers.

In this regard, two widely held assumptions need to be examined. The first is that more satisfied teachers are more effective instructors and the second is that higher levels of career satisfaction among teachers will help attract better qualified candidates into teaching who, because of their better qualifications, will offer more effective instruction. Research suggests that interventions which raise teachers' career satisfaction do not necessarily lead to their increased instructional effectiveness.[39] While low satisfaction works against recruitment and retention, too much satisfaction with their present circumstances can lead teachers to resist needed educational reform. In particular, reform efforts often encounter teacher resistance due to the increased complexity of teacher worklife that new procedures usually entail, at least at the early stages.[40] Such changes threaten to disrupt a pleasant status quo. Hence, while teacher satisfaction may be an important consideration in a long-term strategy for upgrading the teaching force, it often contributes little to stimulate improved classroom performance in the short-term, and may even work against that end. Raising career satisfaction through the

application of incentives, while a useful part of a larger strategy to improve education, is no panacea for enhancing instructional quality.

But do more qualified teachers offer better quality instruction? The ability to raise instructional quality (and ultimately student achievement) by attracting more or better teachers into teaching is problematic. It may be true that without sufficient numbers of qualified teachers instructional quality goes down. But having teachers with the correct amount of pre- service training does not, itself, ensure that good things will happen in the classroom. Student achievement only increases as teachers present appropriate content in effective ways. The link between what it takes for a teacher to be qualified and the probability that those individuals will be effective instructors is a loose connection at best.

Even if a decision is made to raise career satisfaction, can that be done effectively through central ministry actions? The incentives most strongly related to *career satisfaction* were things that can be influenced by central ministry actions, but not always as directly as policy makers might wish. The most direct interventions related to teachers' satisfaction available to central level officials are in the way they design and deliver in-service training and, to a lesser degree, how they create and organize career advancement opportunities. Carefully targeted training with well-designed training materials and effective trainers, all things directly within the control of Ministry personnel, help ensure impact. In most countries, implementing a system for career advancement, while certainly a central ministry charge, poses more serious problems, given the generally unstaged nature of teaching. Only because of the rapid increase in the number of junior secondary schools does the Botswana situation offer more meaningful opportunities for promotion within the education system. Unlike training and career advancement, central ministry influence over instructional supervision provided by a headmaster and community-school relationships within any particular community can only be addressed through people at the school and community level. Central Ministry intervention is limited largely to training headmasters and teachers in how to work with each other and with their local community, and by decentralizing enough authority and responsibility so that these relationships have a chance to work.

On the other hand, being able to affect changes in teachers' actual *pedagogical practices* through central ministry intervention, while every policy makers' dream, is an "iffy" proposition at best. The problems of linking nationally controlled incentives to specific classroom performance are enormous, even when there is evidence that the incentives might be effective in bringing about the desired changes in teaching. The lack of relationship between incentives and teaching performance found in this study challenges even that assumption. One implication of these findings is that using incentives to enhance the overall attractiveness of teaching as a career is far more feasible than targeting incentives to alter classroom practice.

The findings of this study have important implications for educational development activities. Results lend partial support to the usefulness of the framework of teacher in-

centives being employed, to the extent that increasing career satisfaction aids in recruiting and retaining more qualified teachers, but the results raise perplexing questions about how incentives can be used to more directly encourage better classroom pedagogical practices. The findings stand as a caution to educational planners looking to the management of teacher incentives as a catchy, low-cost solution to a very complex problem of human motivation. The incentives most capable of affecting teachers' classroom performance may not be ones easily affected by central ministry interventions. At a more immediate level, the findings offer guidance to educational decision makers in Botswana seeking to structure available incentives in ways that encourage higher levels of teacher satisfaction and a caution to those seeking to encourage more effective teacher pedagogy. Finally, the results suggest variables that need to be explored in other developing countries, characterized by somewhat different social and cultural conditions, which are seeking low-cost ways to reward and support teachers during tight financial times.

Results support three suggestions for interventions that can be undertaken to encourage higher levels of career satisfaction among teachers. First, more attention needs to be given by educational planners to strategies for building positive local community-school relationships. The present findings highlight the importance of these relationships even within a centralized education system in which the local community has relatively little control over the resource flow or personnel decisions of the local school. The findings lend support to efforts now underway in several developing countries to more fully involve parents and community leaders in the activities of the schools and the efforts by some governments to decentralize more decision making to the school and community levels.

Secondly, more attention should be given to the training of headmasters in instructional supervision techniques. While teachers in this study reported very little instructional supervision by headmasters occurred, teachers in schools where it did occur reported higher levels of satisfaction. With the responsibility for instructional supervision, however, must come considerable delegation of authority. Headmasters must be able to identify weak teaching practices, be able to make appropriate and credible suggestions for how teachers might improve their practice, and have the authority to influence teachers to undertake those changes. Third, in anticipation of the time when growth of the education sector slows, more attention should be given to designing meaningful career ladder systems that rely less on ever increasing numbers of schools.

Two cautions must be considered in interpreting these results. First, the search for incentives that motivate desired teacher behavior often is country specific. The incentive value of any particular reward is relative to the context in which it is offered and may differ across locations and change over time. Things that motivate under one set of set of cultural, economic, and professional conditions may not do so in another. A teacher incentive system successfully employed by one country can be regarded by another country as illustrative, at best. A second caution is that within a given country, the search for incentives is a continuing process, as the widespread provision of the reward will

eventually erode its motivational value. For example, the provision of subsidized housing is of greater relative value when housing is scarce and subsidized housing is offered at only a few schools. If it becomes standard practice, its reward value drops. This creates a paradox for educational planners. The provision of those incentives that have the greatest motivational value will eventually serve to undercut that value, while simultaneously ratchet up teachers' expectations of basic conditions of employment. Rather than being a special reward in return for special performance, it will eventually be seen as an expected condition of employment.

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Notes

The authors appreciate the support and assistance of the Botswana Ministry of Education in the conduct of this research. We specially acknowledge the support of Philemon Ramatsui and the staff of the Department of Curriculum Development and Evaluation which he directs and the help of David Cownie, Elizabeth Blake, Mboni Bontsi, and the staff of SIAPAC Botswana in collecting the data used in this study. We also acknowledge the helpful suggestions and comments we received from Thomas Welsh, Frances Kemmerer, Weston Fisher, and Bruce Fuller during the writing stage.

This study was partially sponsored by the U.S. Agency for International Development under contract number DPE-5823-C-00-413-00 (Improving the Efficiency of Education Systems Project) and contract number DPE-5823-Z-9010 (Botswana Junior Secondary Educational Improvement Project) and by the State University of New York at Albany. However, the authors alone are responsible for the contents and conclusions of the study

Table 1

Cluster Analysis for Pedagogical Behavior of Teachers

	Initial Cluster Center			Final Cluster Center			F
	Cluster 1	Cluster 2	Cluster 3	Cluster 1	Cluster 2	Cluster 3	Ratio
Number of Teachers in Cluster	22	325	3				
Number of times teacher speaks to entire classs	-1.75	5.25	-1.76	-.54	.05	-1.40	6.55***
Number of times teacher speaks to individual student or small group	.75	-.58	8.05	.27	-.07	5.06	55.66****
Teacher provided an overview of material to be covered during the period	-1.26	.50	.50	-1.77	.11	.50	46.02****
Teacher presented new material or information	-1.28	-.05	1.20	-.51	.04	-.05	3.12*
Teacher asked students questions or assigned exercises to allow pupils to practice the material	.26	.26	.26	-.56	.03	.26	3.77*
Teacher reviewed with pupils what material was covered in the lesson	-1.29	-.10	1.10	-.92	.05	.30	10.46****
Teacher broke students into smaller work groups	-.37	-.37	3.58	-.10	-.02	3.58	21.53****
Percent of item teacher spent lecturing or presenting material to the entire class	-2.20	-.25	-1.44	-1.12	.08	-1.04	21.52****
Percent of item teacher spend engaging the entire class in recitation or sentence completing drills	.10	.29	1.00	.03	-.01	1.14	1.97
Clear objectives	-1.24	.72	-.26	-1.77	.12	.06	45.66****
Teacher elaboration and use of examples as required	-3.50	.58	.58	-2.36	.15	.17	102.92****
Simple and straight forward presentation	-4.63	.98	-.31	-2.22	.14	.26	85.03****
Focus, direction and goal orientation	-.54	1.19	.61	-1.95	.13	.23	59.49****
Accurate, thorough presentation of content	-5.04	1.41	.49	-2.61	.17	.19	143.01
Teacher preparation	-3.30	.84	.32	-2.25	.14	.15	88.62
Logical presentation	-5.37	.94	.46	-2.38	.16	.13	105.70
Teacher use of feedback	-1.24	.29	1.52	-1.26	.07	.81	21.32
Level of student initiative	-.15	.14	2.71	-.62	.03	1.85	9.98

**** = $p < .001$ *** = $p < .005$ ** = $p < .01$ * = $p < .05$

Table 2

Summary of Separate Regression Analyses to Predict Teachers' Job Satisfaction

	X	SD	N	R^2	F	Beta	T	Sig of T
Remuneration			175	.02	1.85			
HOUSE	1.02	.15				-.07	-.88	.38
EMPL	1.61	.49				-.13	-1.67	.10
Instruction Supervision			99	.17	4.69**			
PRET	1.12	.33				.15	1.45	.15
INSP	1.31	2.36				.08	.78	.44
HEVC	1.08	1.81				.07	.69	.49
GPP	1.35	.48				.31	3.23	.002
Availability of Instructional Materials			130	.04	1.41			
LIB	1.71	.46				-.03	-.18	.86
MAT	3.51	1.84				.10	1.52	.13
TGUD	1.68	.47				.00	-.73	.47
STMT	3.69	1.17				-.13	1.61	.11
Community Support			117	.06	3.69**			
COMSAT	4.21	1.43				.18	1.83	.07
COMSUP	4.98	1.24				.12	1.25	.21
Training			109	.07	2.71***			
TRPROG	.39	.54				.19	2.04	.04
WSKP	2.72	2.24				-.12	-1.23	.22
QUAL	4.99	.76				-.13	-1.34	.18
Opportunities for Career Advancement	4.69	2.05	188	.23	56.91*	.48	7.54	.001

* = p > .001;
** = p > .005;
*** = p > .05

Table 3

Summary Regression Analysis to Predict Teachers' Job Satisfaction

	$\bar{X}$	SD	R^2	F of R^2Chg	F	Beta	Partial Corr	T	Sig of T
Training			.06	4.35**	4.35**				
QUAL	4.90	.77				-.14	-.16	-2.23	.03
WKSP	2.67	1.85				-.08	-.09	-1.30	.20
TRPROG	.41	.55				.14	.16	2.26	.03
Instructional Supervision			.13	3.68**	4.07*				
PRET	1.01	.29				.07	.08	1.01	.27
INSP	1.43	2.01				-.02	-.03	-.34	.73
HEVC	1.16	1.42				.09	.09	1.29	.20
GPP	1.36	.45				.08	.09	1.23	.22
Community Support, Recognition, and Approval			.16	3.31***	3.98*				
COMAST	4.20	1.15				.04	.04	.56	.58
COMSUP	5.00	1.24				.07	.07	1.00	.32
Opportunities for Further Career Advancement	4.71	2.01	.31	38.96*	8.21*	.41	.42	6.24	.001

* = p > .001
** = p > .005
*** = p > .05

Figure 1
Variation of Kemmerers' Framework Employed in the Present Study